

REMARKS

In the Office Action of June 4, 2003, claims 1-19, 21-32, 34-39, 41-43, 53-62, 64-66, 68-71 and 73 were rejected as being anticipated or obvious in view of the one or more cited patents. Claims 20, 33, 40, 44-52, 63, 67, 72, and 74-78¹ were indicated as being allowable if rewritten so as not to be dependent from a rejected base claim and so as to overcome any other objections. Also, the drawings were objected to as not showing the subject matter of claims 56, 57 and 79.

With respect to the claims indicated as being allowable if rewritten, claims 20 and 63 included, among other things, a linearly extensible balloon; claims 33, 40 and 67 required, among other things, a piston and lever with engageable gear teeth; and claims 44-52 and 74-78 included, among other things, a cylinder block with first and second cylinders and first and second pistons slidable with respect to the cylinders.

As set forth in more detail below, applicant has attempted to amend the pending claims by including one or more aspects of these features in a manner which distinguishes the claims from the cited prior art without unnecessarily limiting the claims. Claims 31, 32, 38, 39, 56, 57, 66, and 70-79 have been cancelled without prejudice to prosecuting such claims in a continuing application.

¹ There is typographical error on page 8 of the Office Action, and it is believed that it was intended to refer to claims 74-78.

CLAIM 1

Turning now to independent claim 1, it is directed to a hydraulically actuated medical instrument with an elongated shaft, an end effector at the distal end of the shaft, a handled portion at the proximal end and a fluid flow path between the handle and the end effector through the elongated shaft. As amended, claim 1 now requires that the end effector include an extensible balloon communicating with the fluid flow path and operable upon pressurization through the fluid flow path to cause an effector action.

None of the patents relied upon by the Examiner discloses or teaches an extensible balloon in the end effector of a hydraulically actuated instrument to cause, upon pressurization, an effector action. U.S. Patent No. 4,488,523, the principal reference relied upon by the Examiner, does not disclose or suggest such a feature. Figure 2 of the '523 patent is a cross-sectional view of a portion of the distal end of the device of that patent. There is nothing in a such figure or the depicted structure which remotely discloses or suggests the use of an extensible balloon in an end effector which causes an effector action upon pressurization through a fluid flow path.

Accordingly, it is respectfully submitted that claim 1, as amended, is not described or suggested in the cited references, and that claim 1 and its respective dependent claims should be allowable.

CLAIM 14

Independent claim 14 is directed to a hydraulically actuated medical instrument including a handle portion, an end effector carried by the handle portion, the end effector including first and second hydraulic actuators responsive to changes in hydraulic actuation pressure, and first and second hydraulic fluid flow paths communicating between the handle and the first and second actuators respectively. As amended, the handle portion includes a cylinder block including first and second cylinders communicating, respectively, with the first and second flow paths, and first and second pistons slidably movable with respect to the first and second cylinder. To change the hydraulic pressure, the handle portion also includes first and second members movably mounted and engageable with the first and second pistons to move the pistons relative to the cylinders to change the pressure of hydraulic fluid in the flow path.

None of the prior art patents cited by the Examiner teaches such a hydraulically actuated medical instrument. The hydraulic actuation disclosed in the '523 patent is unlike the hydraulic cylinder block with first and second cylinders and first and second slidably movable pistons as set forth in claim 14, and no such structure is suggested by the '523 patent. Thus, it is respectfully submitted that the subject matter of independent claim 14, and its dependent claims, would not have been obvious in view of the '523 patent, either alone or in combination with other cited references.

CLAIM 53

Independent claim 53, is directed to a hydraulically actuated end effector for an endoscopic medical instrument. In accordance with claim 53, as amended, the end effector comprises a first hydraulic actuator responsive to changes in hydraulic actuation pressure to effect a first action and a second hydraulic actuator responsive in hydraulic pressure to effect a second action, the first or second hydraulic actuator comprising an extensible balloon to cause the effector action. None of the cited prior art patents, as discussed at length above, teaches an end effector that comprises an extensible balloon responsive to an increase in hydraulic pressure to cause an end effector action, and there is no motivation suggested for such a feature.

For the same reasons as discussed above with respect to claim 1, it is respectfully submitted that the subject matter of claim 53 (and the respective dependent claims is not taught or suggested by the prior art and is allowable.

CLAIM 64

Finally, independent claim 64 has been amended to provide that the first and second pressure sources set forth in that claim comprise a hydraulic cylinder block including first and second cylinders communicating, respectively, with the first and second fluid flow paths, and first and second pistons slidably movable with respect to the first and second cylinders.

As discussed with respect to claim 14, these features are not taught or suggested by the '523 patent or other cited

references. Specifically, the '523 patent has no teaching or suggestion of, and there is no motivation for, employing a pressure source as is now set forth in claim 64. For those reasons, it is respectfully submitted that the subject matter of claim 64 and its dependent claims would not have been obvious and are not anticipated in view of the cited prior art.

OTHER OBJECTIONS

The Examiner also objected to claims 17-20, 31-37, 39, 41, 42-43, 56-57, 66 and 71 as being indefinite because of the lack of an antecedent basis for certain references to first and second jaws and hydraulic pressure sources, etc., as recited in claim 17, 31, 37, 42 and 56. Those claims have either been amended to correct any lack of antecedent basis for the claim terminology or have been cancelled. Accordingly, claims are no longer believed to be objectionable under 35 U.S.C. § 112.

The Examiner further objected to the drawings on the grounds that they did not show certain features such as electrodes, scissor blades or remote hydraulic fluid sources as set forth in claims 56, 57, and 79. For purposes of advancing prosecution of this application, those claims have been cancelled without prejudice to pursuing such claims in a continuing application with any drawing corrections that may be required. Accordingly, it is respectfully submitted that the drawings are no longer objectionable under 37 CFR § 1.83(a).

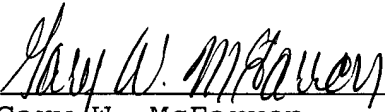
CONCLUSION

For all of the reasons set forth above, it is respectfully submitted that the subject matter of the claims, as amended, is not disclosed or suggested by the cited references, and that the subject matter is not anticipated by and would not have been obvious in view of the references cited. For these reasons, reconsideration and allowance of the pending claims are respectfully requested.

Respectfully submitted,

Date: September 3, 2003

By: _____


Gary W. McFarron
Registration No. 27,357
Cook, Alex, McFarron, Manzo,
Cummings & Mehler, Ltd.
200 West Adams St., Suite 2850
Chicago, IL 60606
Phone: (312) 236-8500

Attorneys for Applicants